

## FIG. 1

13 FREQUENCY DIVIDER  
16 PHASE COMPARATOR  
REFERENCE SIGNAL  
5 18 LOOP FILTER  
OUTPUT MODULATED SIGNAL  
21 DIGITAL PROCESSOR  
DIGITAL MODULATION DATA  
CARRIER SIGNAL  
10 26 DIGITAL  $\Sigma$ - $\Delta$  MODULATION SECTION

## FIG. 2

TRANSMISSION DATA  
AMPLIFIED SIGNAL  
15

## FIG. 3

ORTHOGONAL BASEBAND SIGNALS  
62 POWER CALCULATION SECTION  
64 REFERENCE TABLE  
20 66 NON-LINEAR DISTORTION COMPENSATION SECTION  
72 QUADRATURE MODULATION SECTION  
MODULATED SIGNAL

## FIG. 4

25 101 SIGNAL GENERATION SECTION  
BASEBAND PHASE SIGNAL  
102 PHASE DISTORTION COMPENSATION SECTION

- 103 STORAGE SECTION
- 104 FREQUENCY CONVERSION SECTION
- 105 MODULATION SECTION
- 106 PHASE COMPARING SECTION
- 5 REFERENCE SIGNAL

FIG. 5

PHASE DISTORTION

IN-PHASE COMPONENT WAVEFORM DATA OF BASEBAND PHASE SIGNAL

10 TIME

FIG. 6

- 103 STORAGE SECTION
- 104 FREQUENCY CONVERSION SECTION
- 15 105 MODULATION SECTION
- 106 PHASE COMPARING SECTION
- REFERENCE SIGNAL
- BASEBAND PHASE SIGNAL
- 301 SIGNAL GENERATION SECTION

20

FIG. 7

- 101 SIGNAL GENERATION SECTION
- BASEBAND PHASE SIGNAL
- 102 PHASE DISTORTION COMPENSATION SECTION
- 25 103 STORAGE SECTION
- 104 FREQUENCY CONVERSION SECTION
- 401 MODULATION SECTION

## REFERENCE SIGNAL

402 PHASE COMPARING SECTION

## FIG. 8

- 5 101 SIGNAL GENERATION SECTION
- BASEBAND PHASE SIGNAL
- 104 FREQUENCY CONVERSION SECTION
- 105 MODULATION SECTION
- 106 PHASE COMPARING SECTION
- 10 REFERENCE SIGNAL
- 501 DEMODULATION SECTION
- 502 PHASE DISTORTION COMPENSATION SECTION

## FIG. 9

- 15 101 SIGNAL GENERATION SECTION
- BASEBAND AMPLITUDE SIGNAL
- BASEBAND PHASE SIGNAL
- 102 PHASE DISTORTION COMPENSATION SECTION
- 103 STORAGE SECTION
- 20 104 FREQUENCY CONVERSION SECTION
- 105 MODULATION SECTION
- 106 PHASE COMPARING SECTION
- 601 AMPLITUDE CONTROL SECTION
- AMPLITUDE CONTROL VOLTAGE
- 25 602 POWER AMPLIFIER

## FIG. 10

701 SIGNAL GENERATION SECTION  
BASEBAND PHASE SIGNAL  
702 STORAGE SECTION  
703 PHASE DISTORTION COMPENSATION SECTION  
5 704 MODULATION SECTION  
CARRIER SIGNAL  
705 RADIO SECTION

FIG.11

10 702 STORAGE SECTION  
704 MODULATION SECTION  
BASEBAND PHASE SIGNAL  
CARRIER SIGNAL  
705 RADIO SECTION  
15 801 SIGNAL GENERATION SECTION

FIG.12

701 SIGNAL GENERATION SECTION  
BASEBAND PHASE SIGNAL  
20 704 MODULATION SECTION  
CARRIER SIGNAL  
705 RADIO SECTION  
901 DEMODULATION SECTION  
902 PHASE DISTORTION COMPENSATION SECTION

25

FIG.13

701 SIGNAL GENERATION SECTION

BASEBAND PHASE SIGNAL

BASEBAND AMPLITUDE

702 STORAGE SECTION

703 PHASE DISTORTION COMPENSATION SECTION

5 704 MODULATION SECTION

CARRIER SIGNAL

1001 AMPLITUDE CONTROL SECTION

1002 RADIO SECTION

1003 POWER AMPLIFIER

10 AMPLITUDE CONTROL VOLTAGE

FIG.14

MAGNITUDE OF FREQUENCY CHANGE